MTARTS

METROPOLITAN TORONTO AND REGION TRANSPORTATION STUDY

Box 227 Parliament Buildings Toronto 2 Ontario

news

VOL. I NO. I AUGUST, 1965

ONTARIO PIONEERS GOVERNMENT COMMUTER SERVICE

The Ontario Government, quickly following up its decision to establish a modern suburban rail commuter service, shortly will award contracts for building specially-designed equipment capable of carrying 6,000 passengers an hour on a 52-mile Toronto region lakeshore line between Burlington and Dunbarton.

Announcement of the service, which is scheduled to commence early in 1967, was made by Premier John Robarts and Highways Minister C. S. MacNaughton in a joint statement to the Ontario Legislature on May 19.

Bids to build 48 cars were received from Montreal Locomotive Works Ltd., $3,847,872, and Hawker Siddeley (Canada) Ltd., $3,956,544. Bidding on 10 locomotives were Montreal Locomotive Works Ltd., $3,473,400 and General Motors Diesel Ltd., $3,535,410.

An estimated $7,500,000 will be provided by the government for the purchase of the rolling stock and improving right-of-way and station facilities. Gross operating costs, estimated at $3,500,000 a year, will be subsidized by the province.

The service was recommended by the government's Metropolitan Toronto and Region Transportation Study. This specially-formed organization was created two years ago to devise an overall transportation program for the region bounded by Hamilton and Guelph on the west, Oshawa on the east, and Barrie on the north.

Transportation Study experts recommended that the service be introduced on an experimental basis to assess public acceptability and many matters concerning rail commuter operation. A period of two to three years will be required for the assessment.

In announcing the service, the two government leaders indicated that if it proved successful similar services could be established in other areas showing a high degree of acceptance.

(*Continued on page 2*)

Commuter Highlights

LOCATION—Along Lake Ontario between Burlington and Dunbarton.

DISTANCE—52 miles.

NO. OF STATIONS—14.

EQUIPMENT—Specially-designed modern rail commuter trains, with cars accommodating 125 passengers, drawn by rapid-accelerating diesel locomotives.

CAPACITY—6,000 passengers an hour.

OPERATING TIME—6:45 a.m. to midnight.

TRIP TIMES—57 minutes from Burlington to Union Station, Toronto; 40 minutes from Union Station to Dunbarton.

RUSH HOUR SERVICE—Every 20 minutes, Monday to Friday.

OFF-PEAK SERVICE—Hourly.

SUNDAY AND HOLIDAY SERVICE — Every 90 minutes.

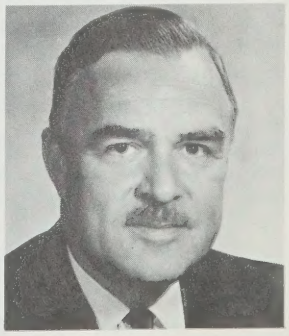
EXPECTED PATRONAGE—15,000 passengers daily.

INAUGURATION—Early 1967.

Premier Lauds New Approach to Transportation

Ontario's decision to establish a rail commuter service makes it a pioneer in government action in this field of transportation, said Premier John Robarts in announcing the project.

"This is the first time that any government in Canada has undertaken this kind of an operation to provide frequent and fast mass transportation," he disclosed.



Premier Robarts

Although the service is being introduced as an experimental pilot project to fully assess its acceptance and capabilities, the government looks to it with high hope for success so that it might be adopted more extensively in the region and, possibly, other parts of the province."

He said that the government had been presented with a number of alternate proposals on the type of service that could be implemented. They offered alternatives of restricted operation with sizeable savings on capital expenditure and operating costs.

(*Continued on page 4*)

Route of New Suburban Rail Commuter Service Along Lake Ontario Shoreline

Commuter Service

(*Continued from page 1*)

A Transportation Study survey which was carried out in the lakeshore line area last year indicated that an initial potential patronage of 15,000 riders a day could be expected for the new service.

Premier Robarts said that the establishment of such a project was only made possible because the railways relocated their marshalling yards. The shift from the downtown area to the outskirts of Metropolitan Toronto will decrease the volume of freight traffic on some lines. Re-location of the Canadian National Railways yard provides available capacity to handle up to 12,000 passengers an hour on the lakeshore line.

The service will be operated on behalf of the government by the C.N.R. at cost under a contractual agreement covering use of its line and maintenance facilities.

The present C.N.R. commuter service, consisting of four trains daily between Toronto and Hamilton, will be replaced by the faster and more frequent government service which will have 14 stations along the line.

Fast, Frequent Service

Under present plans, trains would operate from 6:45 a.m. to midnight, Monday to Friday, with 20-minute service during morning and evening peak travelling periods. During off-peak periods, and on Saturdays, service would be provided on an hourly schedule, and on Sundays and holidays a 90-minute service would be in effect.

The trip times from Union Station to Oakville would be 40 minutes; to Burlington, 57 minutes; and from Union Station to Dunbarton, 40 minutes. Through service will be provided to eliminate changes at Union Station.

Heavy railway traffic on sections of track linking Hamilton and Burlington and Dunbarton and Oshawa prevented an extension of the service unless more than 20 miles of new lines are built.

A small number of railway commuters from Hamilton will continue to be served by long-distance express trains, which they now largely patronize, or they could use parking facilities at Burlington and take commuter trains from there.

Because of an anticipated low patronage from Burlington and Bronte, service to those stations would consist of four peak-period trains daily from Monday to Friday.

Mr. MacNaughton said that consideration is being given to a probable need to re-arrange station locations on the western sector. Such a move would reduce travelling time by about 10 minutes.

Sunnyside station would be eliminated as a commuter stop because patronage prospects are almost nil due to the high degree of Toronto Transit Commission services in the area.

New Stations and Facilities

Other stations that might be affected are Dixie Road, Lakeview and Lorne Park, all of which are located within two miles of adjacent stations. If these stations are eliminated, passengers from Dixie Road and Lakeview would be served through the nearby Long Branch station, and Lorne Park passengers could use either Port Credit or Clarkson stations.

In addition to the two existing stations at Danforth and Scarborough on the eastern sector, four new stations would be located at Eglinton, Guildwood, Port Union and Dunbarton.

Feeder bus services would be provided in areas affected by station changes to minimize passenger inconvenience, and bus services would operate to other stations where they are required.

All stations would be provided with adequate parking facilities and so-called "kiss-and-ride" areas where wives could conveniently drop off and pick up their husbands with the family car.

Mr. MacNaughton emphasized that the service was being tested to determine how many commuting motorists could be lured off the highways by a first-class rail commuter service.

The lakeshore corridor through which the line runs has a population of 568,000 and an estimated 90,000 of that number are commuters. About three-quarters of the commuters presently use cars and over 40 percent, or about 38,000, work in the Toronto commercial area.

It is anticipated that there could be some fare increase over rates charged by the railway in its present commuter service to off-set the higher cost of the more convenient service.

MANY AGENCIES INVOLVED IN TRANSPORTATION PLANNING

What effect will the plans of individual transportation agencies have on the future of the most densely populated and fastest growing area of Ontario and, indeed, all of Canada—an area covering some 3,200 square miles from Hamilton to Oshawa and north to Barrie?

This is a major question occupying the minds of governments and planning officials who bear the responsibility of providing sufficient means of transportation to meet community needs and the overall economic demands of the region.

The problem is not a lack of planning. More than a dozen agencies in the municipal and provincial fields of government have been carrying out transportation planning for decades.

The problem is integration of planning, how the various pieces of the transportation planning jigsaw pattern can be fitted together to produce a more efficient and economic transportation service for the future.

In order to find an answer to this and a number of related problems the Ontario Government embarked on a radical approach to transportation planning in 1962 with the formation of the Metropolitan Toronto and Region Transportation Study.

The assignment that has been given this agency is simply and clear-cut: Determine an overall transportation policy for Metropolitan Toronto and the surrounding municipalities in the region.

In keeping with this assignment it has three objectives:

Devise a coordinated network for transporting persons and goods throughout the region by the most effective means possible.

Define a comprehensive policy which will in effect recommend provincial and local action to provide transportation to meet the needs of a regional community.

Recommend a fiscal policy for transportation services to provide an equitable means of sharing costs and distributing public and transportation revenues among transportation agencies in the region.

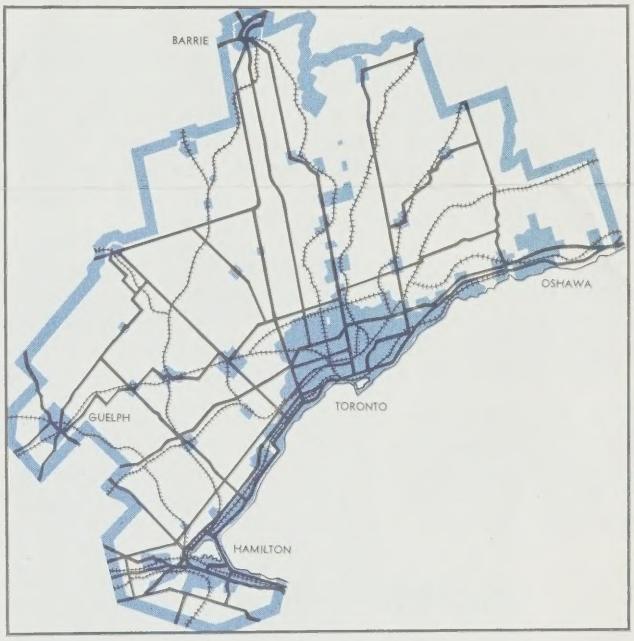
The First Phases of the Study

In the first two years of the Study's operation much of its work has been devoted to gathering and collating statistical data on various modes of transportation and their uses and economic aspects affecting transportation.

Essentially, the major phases of the Study fall into two broad categories. One is an inventory of people and their effects on transportation. The second is an inventory of physical assets, such as roads, railways, industry and natural resources.

Another important field of investigation which is still under way is an examination of short and long-range regional development prospects, involving an evaluation of the economic potential and future patterns of development projected for the years 1972, 1980 and 2000.

This will be followed by a study of land-use concepts related to various types of transportation systems. This phase of the study, expected to be completed this year, will take into consideration



Transportation Study Region

the influence of such planning concepts as ribbon development, satellite development and the effect of metropolitan spread.

Probably the first introduction of the general public to the Transportation Study came last summer when householders in many parts of the region were surveyed on their travel habits to determine the use of automobiles, public transportation, routes and time most frequently travelled.

The first interim report on the Study will be completed later this year. This will contain a detailed accounting of the region for the base year 1964, the year upon which all future projections will be based.

Late this year all information gathered on the Study will be programmed into a computer to project the major characteristics of the region that will affect transportation planning for the three target periods. The conclusions are expected to be contained in a second interim report scheduled for publication in mid-1966.

The same information will be used in establishing a highly-intricate electronic transportation model

(Continued on page 4)

Region Study

(*Continued from page 3*)

that will allow experts to compare and evaluate various transportation systems required for the future.

This will be followed by a study of fiscal and administrative requirements necessary for the operation of a coordinated transportation system.

Final recommendations to the Government will be contained in a third report to be presented early in 1967.

"This Study is the largest and most intensive of its kind in Canada. We expect that it will provide a guide to assist all forms of government to make decisions in solving the difficulties that face us in the field of transportation in this highly-populated and growing region," said Highways Minister C. S. MacNaughton, who is Chairman of the Study's Executive Committee.

"The future demands for transportation could be enormous and highly costly, therefore the period that we are setting aside for constructive planning before these problems are fully magnified is a wise investment in the future," he added.

Mr. MacNaughton also said that he believed the Study likely would provide a formula for carrying out studies of other areas of the province that may be threatened with large-scale transportation problems.

PUBLIC HEARINGS

Public opinion on a number of matters dealing with transportation planning for the future will be sought next Fall by the Metropolitan Toronto and Region Transportation Study during a series of public hearings.

The hearings are being scheduled as part of the Study's investigation of all modes of land travel in the region which will lead to a coordinated regional transportation plan.

Invitations have been extended to municipalities, other public bodies, organizations and individuals to submit briefs on any or all of the following subjects as they affect a regional plan:

The type and location of transportation needed in the future.

The degree to which transportation availability and flexibility affects economic development and land use.

The policies of the different levels of government needed to resolve transportation problems.

Parties wishing to make submissions are asked to file advance letters of intent before July 15. The closing date for accepting briefs will be September 30. The time and location of the hearings will be announced later.

Correspondence and inquiries should be directed to:

The Study Director, Metropolitan Toronto and Region Transportation Study, Postal Box 227, Parliament Buildings, Toronto 2, Ontario.

Premier Robarts

(*Continued from page 1*)

"Since the rail lines could provide a valuable addition to regional transportation," he said, "the government felt that the project deserved a bold, imaginative approach and that a trial service based on any of the alternatives would be less than adequate.

"We wanted it to operate under the best conditions within our power so that it could have the fullest opportunity to prove its function and potential."

He said that it was anticipated that the lakeshore corridor population would almost double to reach 1,000,000 by 1980, and the population of the entire region would more than double to 6,000,000 within the next 35 years.

It was estimated that an expenditure of more than $2.5 billion would be required on transportation in the region during the next 20 years, and more than $4 billion by the end of the century.

"The continued growth of this region, and the province generally, must have adequate facilities in all acceptable forms of transportation to provide freedom of movement," said the Premier.

"If the choice of travel is confined to the automobile, flexibility of movement could become increasingly restricted, even with heavy expenditures on freeways and general road facilities.

"For example, it would require the equivalent of four freeway lanes to handle the line's anticipated initial patronage of 15,000, if these people were driving cars during peak periods," he disclosed, "and similarly, the equivalent of 10 freeway lanes would be required to handle its maximum capacity of 12,000 an hour.

"There is a possibility that the expenditure of funds in establishing acceptable rail commuter operations could, therefore, result in considerable savings on highways construction.

"This," he concluded, "could in turn bring about a more extensive use of transportation funds in other parts of the province."

Canadian National Railways president Donald Gordon said the company was proud to be associated with the service and promised Premier Robarts, "we will do our part to bring about its full success."

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Honourable C. S. MacNaughton, Chairman

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news

VOL. 1 NO. 2 APRIL, 1966

RAIL PROJECT COULD BE BASE FOR FUTURE SYSTEM

The Ontario Government, by undertaking an experimental rail commuter service in the Toronto lakeshore area, is laying the groundwork for a possible provincial mass transit system.

"The experience of large city areas on this and other continents clearly shows that the moving of masses of people cannot be left to the private automobile alone", Highways Minister MacNaughton said in discussing plans for the new commuter service.

The Highways Minister, who is also Chairman of the Metropolitan Toronto and Region Transportation Study which recommended the rail project, said that the government did not intend to discontinue operation of the lakeshore service after its initial experimental period was completed.

"It was estimated that up to three years would be required to complete studies on this type of operation". However, it is possible that a number of major conclusions may be forthcoming before that", Mr. MacNaughton said.

"We announced it as an experimental service because that initial three years will be a trial period for working out a multitude of problems that are inherent in developing a modern rail commuter system, that would be adapted to the particular characteristics of this area and the needs of its people.

"In doing so we also will have obtained important information to guide us on a further application".

Mr. MacNaughton emphasized that the Government decision to enter the rail commuter field could have far-reaching effects on future transportation planning in the high-density population areas.

While the operation of this new service will be "second to none on this continent or any other continent" he said that its success will be measured by the number of car commuters who are willing to abandon their present driving habits and adopt public transport.

"Although Ontario has developed one of the finest highway systems in the world, at a cost of 3.35 Billion dollars during the last two decades, it must turn to other modes of travel to solve transportation problems created by high density population," he said.

By implementing the Transportation Study's recommendation, the government has itself entered the railway commuter transportation field and this direct government involvement is something that is unique on this continent," he said.

"Even with some upward adjustment in fares (which as yet, has not been settled) it is estimated that the government will have to finance between 1.5 and 2 Million dollars of the annual operating cost, in addition to its capital investment on equipment."

Honourable C. S. MacNaughton

Mr. MacNaughton said that experts predict that the population of the region bounded by Hamilton, Oshawa and Barrie will double in the next 35 years to six million people; almost as many as the present entire population of the province.

Population of the five-mile deep lakeshore corridor between Oshawa and Hamilton, but not including the part within Metropolitan Toronto, was expected to double within the next 15 years, to about one million people.

(Continued on page 4)

RESIDENTS IN STUDY AREA TRAVEL OVER 1 BILLION MILES

According to the findings of a household survey carried out in the region, residents in the Metropolitan Toronto and Region Transportation Study Area make more than 1,250,000,000 trips a year and over three-quarters of them are made in motor vehicles.

About 24,000 householders were interviewed to obtain travel and related facts which were pro-

(Continued on page 4)

REGIONAL TRAVEL PREFERENCES REVEALED IN HOUSEHOLD SURVEY

A day in the life of many Toronto-bound workers starts in most cases with a discouraging report from the radio, on traffic conditions in the Metropolitan Area. This is particularly discouraging to the automobile commuter. The question is what motivates the commuter when he decides on his transportation?

A number of people, such as, insurance, sales, doctor's calls and so on, are obliged to use automobiles for their business, but for a large proportion, if a choice were available, could avoid squeezing into the conveyor of traffic to be carried on a wave of congestion and fumes to a parking lot near their work.

If they are lucky, the parking would be free, otherwise they are faced with a parking cost of between 60¢ to $1.50 per day.

It is estimated that 40 percent of Toronto-bound commuters use automobiles. In many of these cases, public transit is available, although often not competitive.

A survey carried out by the Metropolitan Toronto and Region Transportation Study to measure car commuters' motivation and attitude, revealed that from the lakeshore corridor's total population of 510,000, about 90,000 persons travel some five miles in an easterly or westerly direction to get to work daily.

The majority commute by car, and about half of them come into the central Toronto business district.

On analysis, the survey revealed the main reasons why people prefer their cars to commute to work. In order of importance they are:

1. Car is faster than public transport.
2. The car rider is not "tied" to public transit schedules.
3. Public transport is not available for a variety of reasons.
4. Convenience of having a car whenever required during the day.
5. Commuting by car is cheaper.
6. The convenience of loading shopping parcels, etc. in their car.

It is interesting that this survey, which was carried out in the spring and summer, and under good weather conditions revealed that the disadvantage of car commuting uppermost in the majority of minds was the difficulty of driving in bad weather. However, when this factor was coupled with a number of objections to traffic tie-ups and heavy traffic, a general feeling of driving inconvenience emerged.

The main objections to car commuting are listed as follows, in order of priority.

1. Driving is sometimes difficult when the weather is bad.

(Continued on page 4)

FIRST OF STUDY REPORTS TO BE PUBLISHED SOON

The established policy of the Study is to prepare findings and recommendations of the Study process in the form of a sequence of separate reports dealing with each important aspect, rather than an overall document at the end of the work. The first of this series is the report, "Growth and Travel—Past and Present." This report will be released within a few weeks and will consist of an introductory exposition of past and present regional growth determinants and their effect upon travel character and demand.

The intention of this report is to represent (independently of the extensive subject of transportation needs and regional growth predictions, the fundamental social and economic elements of the region which have determined the travel demands of population and industry to date. It is designed to serve as a reference in clarifying and studying the problems and programs that will be documented in forthcoming Study reports.

The contents of this report, which will heavily emphasize the use of maps and graphical presentation, will deal with the region in its overall setting, the history of transportation in the growth of the region, the existing social and economic activities in the region, the current trends in regional development as they affect transportation; and finally the existing pattern of trips and travel demand.

The above representation of the physical characteristics of the Study region is an illustration in the Study Report "Growth and Travel—Past and Present".

M.T.A.R.T.S CONDUCT PUBLIC HEARINGS

Study group at Richmond Hill Municipal Offices. L to R—P. E. Wade, Study Director MTARTS. R. D. Cowley, Chairman Technical Committee. Hon. I. Haskett, Minister of Transport and Vice-Chairman, Executive Committee. Col. A. L. S. Nash, Member of Technical Committee. W. B. Ganong, Program & Liaison Officer, MTARTS.

At the formation of the Study it was proposed that a series of public hearings be held to hear the views of people in the region, as to transportation requirements.

The Study group having the benefit of experts in the transportation field, felt that invitations be extended to all municipalities, chambers of commerce, trade and professional associations in the Study region (a total of 152) as well as the man-in-the-street, to submit their views on what they feel transportation needs are in the future, in a regional context.

To encourage and guide submitters, three questions were embodied in the public notice which was inserted in all the newspapers in the region in May of 1965.

These three questions were:

1. The type and locations of transportation needs in the future.
2. The degree to which transportation availability and flexibility affects economic development and land use.
3. The policies of the different levels of government needed to resolve transportation problems.

It was hoped that this guide would assist MTARTS in their work, and also promote among interested parties not connected with the Study, an appreciation of the objectives of the organization.

As a result of this preliminary advertisement 30 letters of intent were received, and some comment on these hearings appeared in the papers. By coincidence the public notices that were inserted in newspapers appeared after the statement by Premier J. P. Robarts and the Hon. C. S. MacNaughton on the commuter rail trial (reported in this news edition of August 1965) This resulted in many letters of intent stating that they would be submitting briefs on commuter services, and some newspapers carried stories of "commuter hearings". This was not the main purpose of the hearings, however. In November 1965, a further advertisement was inserted in newspapers and the briefs began to arrive in the office.

The hearings which began November 18 and concluded December 9, 1965, drew widespread interest, because of the diversity of the 22 briefs that were submitted.

Members of the Study Executive Committee, comprising Highways Minister C. S. MacNaughton, Transport Minister Irwin Haskett, Municipal Affairs Minister J. W. Spooner, and the Chairman of the Municipality of Metropolitan Toronto W. R. Allen, Q.C., acted as chairmen of the hearings. Sitting with them were members of the Study's Technical Committee and representatives of the Study staff. Hearings were held at Richmond Hill, to receive briefs from the north-central part of the region; Oshawa, covering the eastern sector; and Hamilton for the western section. Four other hearings were held in the Parliament Buildings at Queen's Park, between November 29 and December 9, to hear briefs from municipalities and organizations within the Metropolitan Toronto area.

Briefs were received from the following:

Municipalities

Richmond Hill
East York
Oshawa
Hamilton
Burlington
Long Branch
Scarborough
Toronto Twp.
Pickering
Chinguacousy
City of Toronto

Individuals

G. R. Richardson
J. H. Addison, M.P.
Dr. Charles Magee

Associations

Association of Women Electors
Communist Party of Canada
Metro Toronto Board of Trade
Agincourt Ratepayers' Association
City of Toronto Planning Board
Town Planning Institute of Canada
Toronto Parking Operators Association
Metro Toronto & Region Conservation Authority
Ontario Motor League

Although no final assessment has been made of briefs received, the questions which resulted from their presentation have been considered a worthwhile and important phase of the Study. Data has been obtained, new contacts made, and a well balanced round of opinion has been gleaned. This also served to acquaint the public at large with the Study's objectives.

TRAVEL PREFERENCES

(Continued from page 2)

2. Traffic tie-ups make driving disagreeable.
3. The rapid deterioration of the car, due to all weather driving.
4. Heavy traffic makes driving disagreeable and difficult.
5. Mechanical failures in the car happen while commuting.
6. All factors considered, it is expensive.
7. Driving to and from work is tedious.
8. Increase in car insurance, when used for business.
9. The dangers of driving.
10. The driver can never read a paper while commuting.
11. Commuting by car is tiring.
12. The frustration that other drivers cause.
13. Parking is costly.
14. Difficulty in finding parking space.
15. Commuting by car can be uncomfortable, i.e. too hot or too cold.
16. When commuting by car, one is almost compelled to be sociable with fellow passengers.
17. It takes too long to commute by car.
18. The mental strain on continual driving in heavy traffic.
19. Responsibility and worry of passengers when commuting.

One of the primary objectives of the commuter railway service to be inaugurated in 1967, is to determine how important these objections to automobile driving really are, and finally to answer the question, can the commuter rail form of transportation be developed as a major component of the region's transportation system of the future.

The above information is extracted from a recent report of the Study's technical series entitled "1964 Home Interview Survey — Methods & Results".

RAIL PROJECT

(Continued from page 1)

"Such increases cannot help but have far reaching effects on communities, and influence the pattern of transportation for the future", he said.

Mr. MacNaughton said that "rough estimates of the cost to meet transportation needs within this region alone range from 2.5 Billion dollars over the next 20 years to more than four Billion dollars for the next 35 years. When you think, that we can provide this commuter service over 52 miles for about the cost of what would be required to build 1 mile of the six-lane elevated Gardiner Expressway, it is not hard to see that mass transit makes economic sense from the standpoint of both the commuter and the government.

"The added dimension that the rail commuter service would bring to our transportation system in this region would do much to ensure the freedom of movement which is so necessary to maintain an expansion of our population and economy," the Highways Minister concluded.

RESIDENTS TRAVEL

(Continued from page 1)

jected to represent characteristics of the 2.8 million people living in the 3,200 sq. miles within the confines of Hamilton, Oshawa and Barrie.

This information, gathered in 1964 will provide basic data for a traffic prediction model prepared jointly by the Study and Metropolitan Toronto, to determine transportation requirements for the future. Only trips that originated and terminated within the region were included in the survey.

Data gathered on the basis of travel patterns covering a 5-day working week showed that 4 million trips were made on a weekday, with an average of 1.4 trips per person.

Distribution of total travel showed that 45% of trips originated at home while 44% terminated at home; 46% of all trips or approximately 1,800,000 were made daily between home and work. The second highest category of total travel involved trips made for shopping, school and personal business purposes. These amounted to approximately 1,200,000 trips or 29%. Social and recreational travel accounted for 14% or approximately 550,000 daily trips.

The distribution of this daily travel, by major travel purpose is shown in the accompanying table:

Distribution of Travel by Purpose on an Average Weekday in the Spring of 1964

1. Between Home and Work	46%
2. Between Home and Shopping, School, Personal Business	29%
3. Between Home and Social and recreational	14%
Total Home Based	89%
4. Non-Home Based (no end at home)	11%
Total	100%

Note: Daily travel is based on trips which originate and terminate within the Study Area.

A comparison of the results of this survey, together with the results of a similar 1956 survey covering the Metropolitan Toronto Area, showed that travelling habits had not changed substantially in the 8 year period.

Statistics from the survey showed that there were approximately 750,000 cars garaged in the region which is roughly equal to the number of households.

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Honourable C. S. MacNaughton, Chairman.

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VOL. I NO. 3 AUGUST, 1966

CHANGES IN STUDY COMMITTEE

HONOURABLE IRWIN HASKETT
Chairman
Executive Committee

During the presentation of his Department's estimates address to the Ontario Legislature, the Honourable Irwin Haskett, Minister of Transport, announced that he had succeeded the Honourable C. S. MacNaughton as Chairman of the Study's Executive Committee. Mr. MacNaughton will remain as a member of the Executive Committee, while the Honourable J. W. Spooner, Minister of Municipal Affairs becomes Vice-Chairman. A further important change, is the addition of the Honourable Stanley Randall, Minister of Economics and Development as a member of the Committee. Mr. William Allen, Chairman of the Municipality of Metropolitan Toronto will continue as a member of the Executive.

In making the announcement, Mr. Haskett emphasized the importance that the Study attached to the regional development and economic aspects that the Study is investigating. Therefore, the addition of Mr. Randall and the appointment of Mr. Spooner as Vice-Chairman would greatly strengthen these Study features.

Although the Hon. C. S. MacNaughton's responsibility concerning the commuter rail service (as described elsewhere in this newsletter) will be heavy, he will continue to participate as a member of the Study's Executive Committee.

ECONOMIC PROSPECTS IN THE STUDY AREA

A study was conducted by Larry Smith & Co. to establish the economic framework of the study region in terms of projected population and employment levels and land use requirements, within which transportation planning for the MTARTS area could be carried out.

For purposes of analysis the study area was divided into five development sectors. The central manufacturing areas of Toronto and Hamilton and the townships located around the urban areas of Oshawa were chosen as the three lakefront units. The northern remainder of the MTARTS area was divided into further residual areas; one representing the northwest access along the line Toronto, Brampton, Georgetown and Guelph and the other comprising the northern and the northeastern sectors of the study area focusing on Barrie at the northernmost point.

In summary, the study revealed that this MTARTS region is a highly urbanized area where the economy is mainly oriented towards manufacturing, trade, finance and services, serving in many instances a national and provincial as well as a local market. Primary industry (i.e. agriculture and extractive industry) plays a relatively minor role in the economy in the Study Area. Manufacturing is a principal source of employment and there is a relative specialization in the production of durable goods. The Study Area represents the largest concentration of manufacturing capacity in Canada and the volume of goods produced in terms of the selling value of factory shipments was one-quarter of the Canadian total in 1961.

The factors of production in terms of land, manpower, resources and capital, plus the basic infrastructure of transportation and related services, are sufficient to support the continued growth of the Study Area economy. The actual expansion will, however, be determined largely by demand conditions, both domestic and foreign. Under

present policies and tariff arrangements, however, it is expected that the growth of the Study Area economy will have to depend for the most part on Canadian sources for demand. An annual average growth rate of between 3 and 4 percent is forecasted for the economy of the Study Area.

Over the past 60 years the MTARTS area, in terms of population, employment and manufacturing capacity, has shown a consistent record of growth. From analysis of the factors of production, the availability of markets and the distribution of population throughout Canada, it is expected that the MTARTS area will increase its proportionate share of the Canadian economy in the years ahead. The implications of such growth in terms of employment and population are outlined below:

EMPLOYMENT

Sector	1964	%	2000	%
Toronto	769,900	75.8	1,600,000	68.7
Hamilton	146,900	14.5	360,000	15.5
Guelph	37,500	3.7	150,000	6.4
Barrie	21,900	2.1	95,000	4.1
Oshawa	39,300	3.9	125,000	5.3
Study Area	1,015,500	100.0	2,330,000	100.0

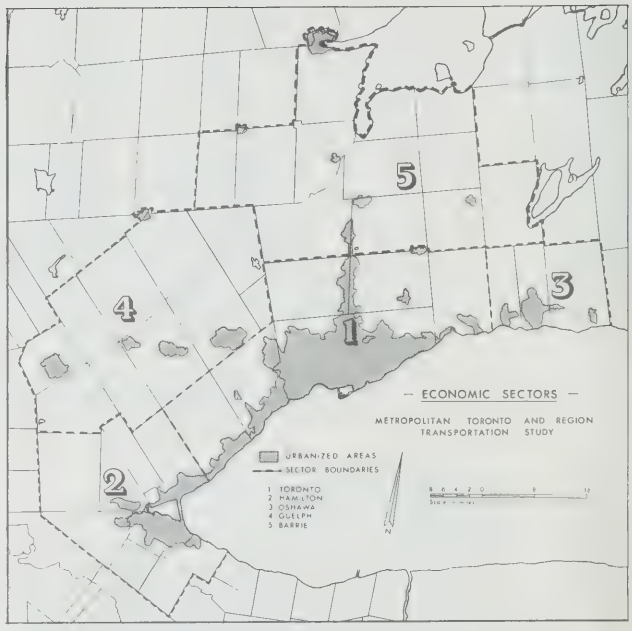
The increase in employment from 1964 to 2000 is projected at 1,314,500 which represents an increase of 129% over the 1964 total.

POPULATION

Sector	1961	%	2000	%
Toronto	1,824,481	71.4	4,210,000	65.5
Hamilton	395,189	15.5	990,000	15.4
Guelph	120,607	4.7	480,000	7.5
Barrie	112,904	4.4	380,000	5.9
Oshawa	103,093	4.0	370,000	5.7
Study Area	2,556,274	100.0	6,430,000	100.0

The population prediction which was prepared by the Ontario Department of Economics and Development for the economic base study, with a net migration rate of 10,000 per annum, was selected as a projection which would provide the overall control total governing the future population growth for the Study Area.

This region's population as a percentage of the Canadian population has grown from 8.9% in 1901 to 14% in 1961. As a percentage of the Ontario population it has grown from 21.8% in 1901 to 41% in 1961. The consultants felt that this study area would continue to increase its share of the National and Provincial share of the populations until about 1980, but thereafter, its relative share is expected to stabilize.



Economic Sectors in Study Region.

The total population of the MTARTS area has been projected to increase from approximately 2,556,300 in 1961 to approximately 6,430,000 in the year 2000. This represents an increase of 3,873,726 persons over the 1961 total or an increase of 152%.

This total population was distributed among the five development sectors according to historical trends, as well as an interpretation of the future patterns of developments within the Study Area. Distribution of sector population as a percentage of the total Study Area population is shown in the above total.

The study of the regional economic base which produced the above forecasts, has been recorded in the report *"Study of Regional Economic Prospects"*. Although this report has not been released publicly, copies are available for reference in the libraries of the Metropolitan Toronto and Region Transportation Study, the Metropolitan Toronto Planning Board, the Department of Highways, the Department of Municipal Affairs, the Department of Economics and Development, and the Department of Transport.

THE FORECASTING OF TRAFFIC ON FUTURE TRANSPORTATION SYSTEMS

F. D. Catton, Transportation Engineer, MTARTS

In planning for a rapidly expanding and increasingly prosperous Metropolitan population such as exists in the region under study by the Metropolitan Toronto and Region Transportation Study, it is evident that sophisticated planning techniques must be developed to forecast future traffic conditions as accurately as possible.

To properly develop prediction techniques, it is important that the trip making characteristics of the population be known under today's conditions. Questions such as where a person is making his trips today and why, need to be fully understood before an attempt is made to project these trips into the future.

Trip making is a function of three basic elements:

1. The pattern and intensity of land use.
2. The various social and economic characteristics of the population.
3. The type and extent of the transportation facilities available.

The relation of trips to these basic elements can be found primarily through extensive study of data gathered from surveys with the trip makers. In order to obtain this data, a cross-section of trip makers within the area under study are interviewed and their travel habits recorded.

It has been found, after analysis of surveys of this type, that trips can be estimated through the application of mathematical formulae, within reasonable limits of accuracy. These formulae simply relate the causes of trip making to the actual trips measured in the traffic surveys. It has been found, for example, that each home produces a predictable number of trips per day. The number of homes or dwelling units in an area can therefore be used as a variable in a mathematical expression for predicting trips in that area. It follows that if dwelling units can be estimated in the future, the number of trips can be estimated as well.

This, of course, has been overly simplified for discussion, but the underlying fact is that trips can be related to measurable quantities: population, dwelling units, car ownership, employment opportunities, etc. These quantities can be projected into the future by planners.

The group of mathematical formulae, when integrated and calibrated to existing conditions, form what is usually referred to as a "Traffic Prediction Model". The traffic prediction model developed by MTARTS and the Metropolitan Toronto Planning Board, is composed of three major components:

1. *TRIP DISTRIBUTION*

This consists, firstly, of a mathematical technique by which the number of trips made by persons in each zone in the region are calculated. Secondly, by applying a relationship similar to Newton's Law of Gravity, these generated trips are attracted or "pulled" to other zones in the region. The strength of this pull is associated directly with the nature and intensity of the land use in each zone, and indirectly with the distance (or travel time) to that zone from each zone of origin.

2. *MODAL SPLIT*

This consists of a technique for determining the percentage of trips made by all people, which would use public transit or private automobile from each origin to each destination under given conditions. This split of person trips to the transit mode or to the auto mode is dependent upon the relative travel times, travel costs, and levels of service of public transit versus private automobile; and on the economic status of each trip maker and the purpose of his trip.

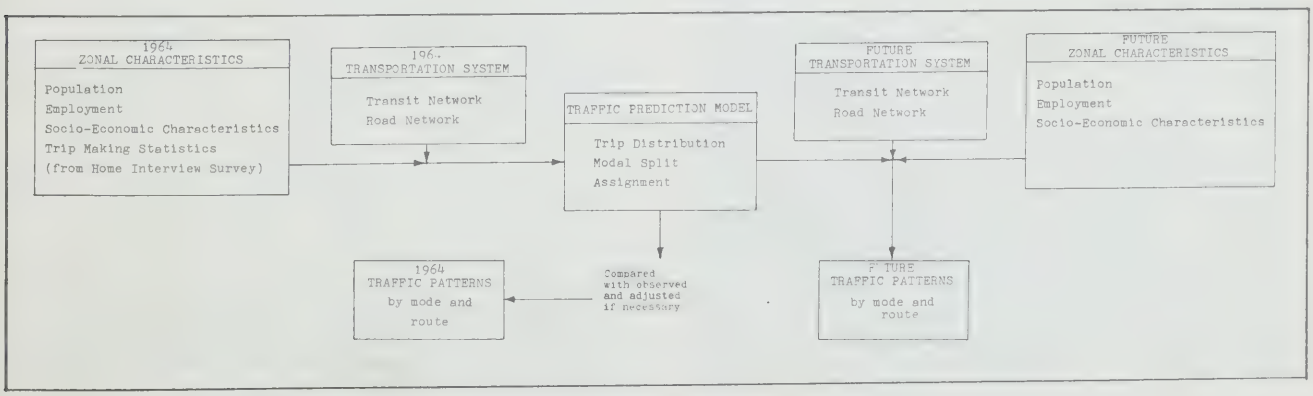
3. *TRAFFIC ASSIGNMENT*

This is a mathematical technique of assigning trips by mode to a transportation system through the application of travel time and cost relationships for each route available. In this way a realistic distribution of trips between a number of alternate routes through the transportation network is estimated.

In general, the model carries out an ordered group of calculations which permit the determination of zone to zone movements by transportation mode and by route. The calculations are performed by an electronic computer in a matter of minutes, a task that would take thousands of manhours if done by hand.

By performing the same group of calculations, the model can be used to forecast future zone to zone movements by mode and by route for a given input of future land use and transportation facilities. A variety of inputs can be tested in this way, which enables transportation engineers to design a realistic and workable transportation plan for the future.

The MTARTS Traffic Prediction Model, therefore, is an effective tool to enable planners to study the probable consequences, in terms of traffic patterns, of a variety of future alternatives of both transportation and land uses in the MTARTS region.



The MTARTS Traffic Prediction Process.

GO TRANSIT COACHES ATTRACTIVELY DESIGNED

Canada's first specially-designed rail commuter service, to begin operation next year along the lakeshore, was officially christened "Government of Ontario Transit" when details of its modern equipment and symbol recently were made public by Highways Minister C. S. MacNaughton.

The symbol has been designed in the form of the letters G and O in solid green welded together by the white horizontal and vertical bars of the letter T laying on its side. It will be used to identify all trains, stations and other service facilities and form part of the short name, "GO Transit" which is to be adopted for promotional purposes.

The 85-foot long units will have a bright exterior finish of brushed aluminum with a band of white trim along the bottom edge of the sides. Extra wide automatic doors at both ends will permit capacity loading of 94 seated passengers in one minute.

A softly-cushioned "bucket' 'type seat has been developed to combine with the modern decor of the cars and provide a maximum of passenger comfort, said Mr. MacNaughton. Matching seat dividers will contain recessed ashtrays.

Mr. MacNaughton said that the 94-seat plan adopted for each unit was a more spacious layout than normally provided in such services.

The decor of all units has been designed to achieve the effect of luminosity through a combination of color selection and lighting arrangement.

End panelling in the vestibule will be in a soft shade of green; sidewalls will be doeskin-colored; bulkheads will have facings in ebony and rosewood; and ceilings will consist of milk-white translucent plastic panelling illuminated by concealed fluorescent lighting.

Floors will be covered in a new process of highly-durable and easily-maintained poured plastic material that will give a marbled appearance of all colors employed in the decor.

Interior of GO Transit Coach.

Large, scenic-view windows in the cars will be glazed with "gray light" glass to reduce glare and heat. Each unit will have its own thermostatically controlled air-conditioning and electric heating system to provide complete passenger comfort at any season of the year.

All trains will be equipped with a public address system for station announcements and soft music; and each train will be in constant contact with the central dispatch centre through two-way radio.

Because all trains will operate on the "push-pull" principle to eliminate time-consuming turnarounds at terminal points, eight of the 40 coaches will be equipped with an engineman's cab containing remote control operating equipment linked to the locomotives. Two of the nine self-propelled cars also will be equipped with double-end controls for possible operation as single units.

All operating ends of the coaches and self-propelled cars will be painted white to accent the clean, uncluttered exterior appearance of their design.

GO Transit symbols will be displayed on the sides of all units and on the ends of all operating units.

The nine self-propelled units will be powered with Rolls Royce diesel engines capable of speeds slightly over 80 miles an hour.

Mr. MacNaughton said the structural design of the coaches and self-propelled units represents a major break-through in rail equipment development on this continent.

"Tremendous reductions in the weight of these units have been achieved through the selective use of aluminum and high-strength steels. Such reductions will be reflected in higher speeds and reduced operating costs", he said.

The coaches will weigh approximately 65,000 pounds compared to 122,000 pounds for existing similar equipment, and the 90,000 pound self-propelled cars will be 51,000 pounds lighter than similar models.

Eight diesel-electric locomotives on order from General Motors Ltd. are a stock model. Rated at 3,000-horsepower and capable of speeds up to 83 miles an hour, they will be used mainly during peak travelling periods as propulsion units for trains consisting of a maximum of 10 cars.

Mr. MacNaughton said that construction of the rolling stock and construction work on the right-of-way will begin early in the summer.

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Honourable Irwin Haskett, Chairman.

MTARTS

METROPOLITAN TORONTO AND REGION TRANSPORTATION STUDY

Box 227 Parliament Buildings Toronto 2 Ontario

news

VOL. 1 NO. 4 APRIL, 1967

MEASURING THE IMPACT OF GO TRANSIT

Government to study response to commuter rail service by the population along lakeshore corridor.

What happens when a rail commuter service is introduced?

What benefits does it bring to the people it serves? Why do some use it and others ignore it? What do they like and dislike about it? How does it affect their decisions on where to work and where to live?

How does it change the patterns of automobile traffic? How does it change the nature of the communities it serves — the kind of person who chooses to live there, the cost, type and density of housing, the development of commerce and industry?

These are some of the questions about GO Transit that will be examined in a two-year research project announced by the Hon. Irwin Haskett, Minister of Transport and chairman of the Metropolitan Toronto and Region Transportation Study. "This is a major project and it will carry through the planning concepts on which GO Transit is based," Mr. Haskett said. "The commuter rail service is a new facet of the Provincial Government's role in transportation and it is important that we assess its use and impact in detail."

"The findings of this research will not only guide the GO Transit management in giving the best possible service; they also will assist in future consideration of other commuter rail lines and in the planning of transportation networks in urban areas throughout the province."

The research is being directed by the Metropolitan Toronto and Region Transportation Study, which recommended the creation of GO Transit and which is continuing its study of present and future transportation networks in the region extending from Oshawa to Hamilton and Guelph, and north to Barrie.

Close to 100,000 persons will be asked for information and opinions in the course of the project.

It begins this month with 24,000 telephone calls and hundreds of personal interviews. These will be part of a "before" study, to be completed well in advance of the inauguration May 23 of the Hamilton-Toronto-Pickering service of Government of Ontario Transit. Further full scale surveys will be carried out after the service is in operation.

The phase of the research dealing with economic impact — changes in property values, industrial development and patterns of land use—is being carried out by the Department of Municipal Affairs.

The Transportation Study has engaged a Toronto firm, Recon Research Consultants Ltd., to undertake interview surveys of attitudes and characteristics.

Those interviewed will be a carefully calculated sample of the residents of the "lakeshore corridor" which is expected to provide more than 90 per cent of the commuter line's patronage. The corridor varies up to six miles in width and extends along Lake Ontario from east of Pickering to west of Bronte.

Population of this corridor (mostly outside Metropolitan Toronto) is expected to nearly double within 15 years, to about one million.

Letters will be sent in advance to those who will be telephoned, telling them of the nature of the project and asking their co-operation.

Questions will seek to establish such points as the number of people in a household, how many are wage-earners, where the wage-earners work and how they have been getting to and from work in the past.

(Continued on back page)

PROGRESS REPORT: HOW THE STUDY SERVES PRESENT AND FUTURE

In summary, here is what the Metropolitan Toronto and Region Transportation Study has done to date, and what is now under way:

- Massive detail has been collected on how, where and why people travel in the region. They make a total of four million trips every workday, and about half of these are to or from work.
- Factors that affect transportation, present and potential, have been examined. Included are an analysis of where people live and where they work; the geography and economy of the region; and the choices of transportation now available by road and railway.
- Organization and financing policies of existing transportation authorities are being researched and evaluated.
- The preferences, hopes and plans of individuals, associations and municipalities have been obtained in the course of public hearings and 25,000 home interviews.
- The feasibility of rail commuter services was assessed. The study's findings and recommendations led to the decision by the Government of Ontario to establish "GO Transit" a modern suburban rail service.
- Reports have been made on many of the specific subjects involved in the study. (See page 4 for a list of these publications.)
- A summarized public report on some important research findings, "Growth and Travel, Past and Present", was published in 1966.
- Analysis of development in the region, including future prospects up to the year 2000 has been carried out by the Department of Municipal Affairs.
- As noted on Page 1, the Study will direct research on the use and effects of the GO Transit service over a two-year period.
- Based on the mass of related information obtained and collated to date, the Study has developed a "trip prediction model" as a technique for realistic future urban transportation research and planning.
- The Study now is evaluating the anticipated travel patterns and needs of the region in the future, concentrating on the years 1980, 2000. This research is intended as a basis for planning the overall transportation network, including rail and road services, that will best serve the people of the region.

This Transportation Study was established by the Province four years ago as a new approach to the challenge of transportation in a fast-growing, heavily populated region.

Its purpose is to provide for benefits to the future way of living of nearly three million people in central Ontario—from Hamilton to Oshawa and north to Barrie — by planning the network of tranportation that will do the most for their convenience and their livelihood. The findings of the study are intended to assist in the transportation planning of urban areas throughout Ontario.

Photo shows entrance way to the Rouge Hill prototype station. This station is typical of ten other stations which are being completed for GO Transit. This station will provide parking for 124 cars, and has two 350 ft. platforms which will be equipped with twin shelters.

GO TRANSIT TO OPEN MAY 23

GO Transit will begin the first phase of its Hamilton-Toronto-Pickering service on May 23, Highways Minister G. E. Gomme has announced. Further trains will be added on June 26, July 17, and the beginning of September to bring the rail commuter system into full operation.

The service should save commuters both time and money, Mr. Gomme said. He emphasized that it is "primarily designed to attract the automobile commuter off the highways." The Province has undertaken to subsidize operating costs to ensure that fares are competitive.

In full operation, peak-hour service will be every 20 minutes. Off-peak, weekend and holiday service will be hourly between Oakville and Pickering. Trains will operate from 6:00 a.m. until close to midnight. Between Oakville and Hamilton there will be two trains in the morning and two in the evening.

For fares, a formula of 3.5 cents per mile has been adopted for multiple ride commuter rates, with a 42-cent minimum. For single fares there is a premium of 25 per cent. Children's fares will be a flat 25 cents, regardless of destination.

Mr. Gomme noted that out-of-pocket costs of four cents per mile were normal for driving a car, with parking costs in addition.

These are the fares to Union Station when tickets are purchased on a multiple ride basis:

From Hamilton $1.36; Burlington $1.15; Bronte $.91; Oakville $.77; Clarkson $.59; Lorne Park $.53; Port Credit $.50; Long Branch $.42; Mimico $.42.

From Pickering $.71; Rouge Hills $.59; Guildwood $.50; Eglinton $.42; Scarborough $.42; Danforth $.42.

Timetable and Fare brochure is now available at the GO Transit office, Suite 614, 74 Victoria St., Toronto.

Telephone Toronto 363-0253
Pickering/Ajax 942-2000
Oakville/Burlington 845-6694

AVERAGE TRIP TO WORK TAKES NEARLY HALF AN HOUR

In the region covered by the Transportation Study, people spend a total of 228 years every work-day just coming and going.
That total time (two million hours) is devoted to about four million trips daily, two-thirds of them by car.

These are among the findings noted in "Growth and Travel, Past and Present", the first of the final reports of the Transportation Study. They illustrate the importance of routine travel in everyday modern life.

With the amount of travel increasing steadily, they also indicate the magnitude of the challenge faced by transportation planners. (The figures in the reports are based on pre-1966 studies when the population of the region was about 2.8 million.)

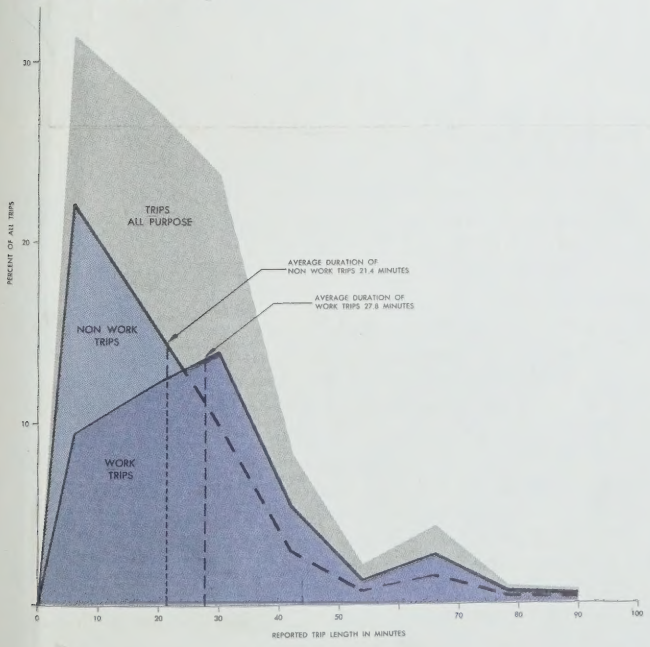
Getting to and from work is the biggest single factor, accounting for nearly half the trips and more than half the total time. The worker in Toronto spends twice as much time travelling as his counterpart in other metropolitan areas in the region.

The average time for the trip from home to work (or vice versa) is 27.8 minutes, and for some 80,000 workers in the region it takes an hour or more.

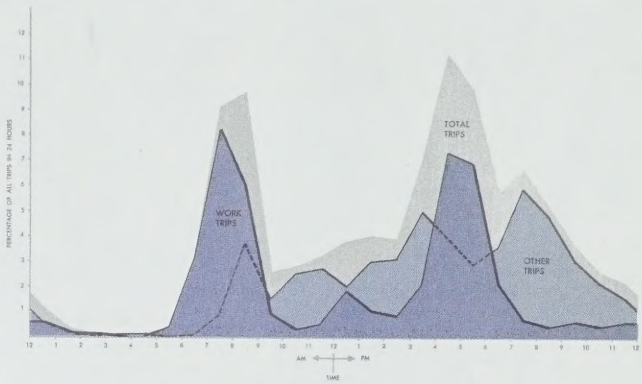
Those who spend the least average time on work trips are the residents of Guelph (13.1 minutes); the Townships of East Whitby and Whitby, including Oshawa (15.7 minutes); and Barrie (17 minutes).

For Hamilton and Burlington areas, the average times are around 23 minutes. For Oakville the average is 21.3 minutes.

Residents of the Borough of Scarborough devote the greatest average time to work trips — 32.9 minutes per trip.



Distribution of regional trips by duration.



Distribution of regional trips during the day.

Several other areas are close to that average time. They include the following:

The Townships of Vaughan, Markham and Toronto Gore, and Stouffville—32.5 minutes.

The east end of Toronto—32 minutes.

The north-east section of Toronto, East York and the part of North York south of Highway 401—31.8 minutes.

North-west Toronto, extending through York and North York Boroughs as far as Highway 401—31.5 minutes.

The part of North York lying north of 401—31.4 minutes.

These reflect the concentration and congestion of traffic and trips in the built up areas around Toronto. Travel conditions that are normal in one area may be considered intolerable in another. Analysis pinpoints the location where there is serious congestion.

These findings and similar criteria, as measured today and forecast for future conditions, supply evidence to the Study in its examination of regional transportation.

INFORMATION PLEASE

We're getting more and more requests for information as the extensive nature of the transportation Study's data bank becomes known.

They have come, for example, from the U.S.A. and from students writing essays and theses; from universities and from an oil company making a marketing study; from departments of government and from many municipalities studying their local transportation.

The Metropolitan Toronto and Region Transportation Study is glad to fill requests like these whenever the desired information is available. Often a pertinent report can be supplied; sometimes it is necessary for enquirers to come into the office to examine statistics and papers; and in some cases the enquirer is referred to the agency initially responsible for the information.

The following are reports, papers and printed materials that are available on request:

PUBLICATIONS AVAILABLE

PROSPECTUSES

Prospectus

22pp. Initial document on Study Objectives—1963.

Statement of Study Authority

2pp. Re-evaluation of the work of MTARTS and its future program—1965.

Transportation for the Future

2pp. Brochure outlining the problem, projects and policies of MTARTS, also personnel of Committees—prepared for distribution to Conventions, etc.—1964.

TECHNICAL PROCEDURE AND FINDINGS

i) ***Study of Existing Railway Lines.** 39pp.
—An Inventory of rail lines radiating from Toronto and a report on their adaptability for Commuter use.
By: De Leuw, Cather & Company (Canada) Ltd.—1963.

ii) ***Commuter Rail Project for the Lakeshore Corridor.** 106pp.
—Burlington-Toronto-Dunbarton. Findings of study, including patronage estimates, estimated capital and operating costs and program for implementing trial service.
By: De Leuw, Cather & Company (Canada) Ltd.—1965.

iii) **1964 Home Interview Survey.** 47pp.
—Methods and Results. Reports on basic travel and household information obtained from a sample of the region.
By: Traffic Research Corporation—1965.

iv) **Modal Split Analysis for Traffic Prediction Model.** 61pp.
—Describes derivation of a technique used to estimate the proportion of persons who travel between any O-D by Auto, Commuter railway and Public Transit, in the Region.

v) **Administrative & Financial Structure of Transportation in the Study Area.** 71pp.
—Describes existing organization, administration, planning and financing of public transportation within Study area.
By: F. H. Finnis, M.B.E.—1966.

vi) ***Commuter Rail Market Report.** 68pp.
—Attitude and Motivational Study of automobile commuters who travel to work from within the lakeshore corridor between Burlington and Ajax. Study carried out in conjunction with Commuter Rail Project for the Lakeshore corridor.
By: Lyon de Brouwer & Company—1964.

***Study of Regional Economic Prospects.** 172pp.
—An overall regional assessment of future population and employment growth, etc.
By: Larry Smith & Co.—1965.

vii) **Growth and Travel—Past and Present.** 67pp.
—A study of the basic components of growth in the Toronto centred region and their relationship to travel characteristics and demand. (Vol. I)—1966.

viii) ***Transcript of Public Hearings.** 197pp.
—Submission by municipalities, agencies and the public. Region-wide invitation by MTARTS for briefs on transportation requirements. 1965.

*These reports are out of print. A copy may be borrowed upon request.

Published by the Metropolitan Toronto and Region Transportation Study, an authorized agency of the Province of Ontario. Postal address: Box 227, Parliament Buildings, Toronto 2, Ontario.
Honourable Irwin Haskett, Chairman.

THE STUDY COMMITTEES

The Hon. G. E. Gomme, Minister of Highways, has been appointed to the executive committee of the Metropolitan Toronto and Region Transportation Study. He succeeds the former Highways Minister, The Hon. C. S. MacNaughton.

The Executive committee now consists of Transport Minister Irwin Haskett, chairman; Municipal Affairs Minister J. W. Spooner, vice-chairman; Economics and Development Minister S. J. Randall, Mr. Gomme, and Mr. W. R. Allen, Chairman of the Municipality of Metropolitan Toronto.

The Technical Advisory and Coordinating Committee has been enlarged with the staff of four agencies not previously represented on the Committee. Staff changes within organizations have resulted in other replacements. The following is the membership of the Technical Advisory and Coordinating Committee:

R. D. Cowley, Department of Transport; A. E. Argue, Traffic and Planning Studies Engineer, (succeeding W. Q. Macnee, now Deputy Minister of Transport); W. E. P. Duncan, Transit Consultant; G. O. Grant, Commissioner of Roads, Metropolitan Toronto; J. G. Inglis, General Manager, Toronto Transit Commission, (new member); John Mason, Executive Assistant to the Minister of Economics & Development, (new member); N. B. Roberts, Assistant Regional Engineer, Canadian Pacific Railway; K. H. Sharpe, Assistant General Manager, Ontario Water Resources Commission, (new member); D. F. Taylor, Director, Community Planning Branch, Dept. of Municipal Affairs; A. R. Williams, Manager, Toronto Area, Canadian National Railways, (succeeding J. H. Spicer); W. Wronski, Commissioner of Planning, Metropolitan Toronto, (succeeding the former Commissioner of Planning, E. Comay).

RESEARCH (*Continued from front page*)

In addition, there will be specific questions about reactions to the GO Transit service, including schedules and fares, and in some cases the questions will go on to ask preferences in modes of travel.

Other methods in the research project include questionnaires for commuter train riders; an analysis of traffic surveys and counts of commuter patronage; evaluation of the use of related parking lots and "kiss-and-ride" facilities; and economic studies.

Mr. Haskett said the research is intended to satisfy seven basic objectives:

1. To evaluate the overall success of GO Transit.
2. To provide information to guide management in operation of the service.
3. To provide information to assist the advertising program.
4. To provide information for planning future commuter rail services.
5. To provide basic data in developing traffic forecasting procedures for transportation planning.
6. To measure the impact of the service on other forms of transportation.
7. To measure the impact of the service on land use and economic development of the lakeshore corridor.